



| Interface | | |
|-----------|--------|----------------------|
| Pin no | Symbol | Function |
| 1 | FG | Frame ground |
| 2 | VSS | Power supply (GND) |
| 3 | VCC | Power supply(+) |
| 4 | VO | Contrast Adjutment |
| 5 | VEE | Negative Voltage |
| 6 | /WR | Data write |
| 7 | /RD | Data read |
| 8 | /CE | L: chip enable |
| 9 | C/D | "H" Command,"L" Date |
| 10 | /HALT | Power - saving |
| 11 | /RST | Reset signal |
| 12 | DB0 | H/L Date bus line |
| 13 | DB1 | H/L Date bus line |
| 14 | DB2 | H/L Date bus line |
| 15 | DB3 | H/L Date bus line |
| 16 | DB4 | H/L Date bus line |
| 17 | DB5 | H/L Date bus line |
| 18 | DB6 | H/L Date bus line |
| 19 | DB7 | H/L Date bus line |
| 20 | NC | No Connection |
| 21 | LEDA | LED B/L (+) |
| 22 | LEDK | LED B/L (-) |

| Feature | | | |
|------------|------------|----------------|-------------|
| Controller | T6963C | Module | 129 x 102 |
| Duty | 1/128 duty | Viewing Area | 101 x 82 |
| Bias | 1/12 bias | Mounting hole | 122 x 93.5 |
| B/L | White | Character Size | 0.54 x 0.54 |

| Absolute Maximum Rating | | | | | |
|----------------------------|----------------------------------|-----------|------|----------------------|-------|
| Item | Symbol | Condition | Min | Max | Units |
| Supply for logic voltage | V _{DD} -V _{SS} | 25°C | -0.3 | 7 | V |
| LCD driving supply voltage | V _{DD} -V _{SS} | 25°C | -0.3 | 13 | V |
| Input voltage | V _{IN} | 25°C | -0.3 | V _{DD} +0.3 | V |

| Electrical Characteristics | | | | | | |
|----------------------------|----------------------------------|-----------|------|------|------|-------|
| Item | Symbol | Condition | Min. | Typ. | Max. | Units |
| Power supply voltage | V _{DD} -V _{SS} | 25°C | 4.5 | - | 5.5 | V |
| LCD operation voltage | V _{OP} | 25°C | - | 14.5 | - | V |
| LED Forward Voltage | V _F | 25°C | - | 3.2 | - | V |
| LED Forward Current | I _F | 25°C | - | 150 | - | mA |